

REMARKS

The present invention is a locally distributed speech recognition system for converting spoken language of the user into digitized readable text for a mobile communication device, a mobile communication device for use in a locally distributed speech recognition system, a method for operating a locally distributed speech recognition system for interpreting the speech of a user, a method for operating an interpreting component for use with a transmission facility and a remote mobile communication device. A locally distributed speech recognition system in accordance with an embodiment of the invention as illustrated in Fig. 1 for converting spoken language of the user into digitized readable text for a mobile communication device 4 comprises a preliminary recognition component located in the mobile communication device 4 an interpreting component 10 located remote from the mobile communication device and connected via a transmission facility 8 with the mobile communication device wherein a re-transmission component for re-transmission of the digitize readable text back to the user is provided, the re-transmission component being connected to the interpreting component.

Claim 19 stands objected to pertaining to antecedent basis. Newly submitted claim 56, which corresponds to claim 19, has been drafted to overcome the stated grounds of objection.

Claim 46, which corresponds to claim 9, has been amended to recite "remote" in place of "delocalized" as suggested by the Examiner.

Claims 26 and 29 stand rejected under 35 U.S.C. §112 as being indefinite regarding the terminology "origin of the code". Claims 63 and 66, which correspond

to claims 26 and 29, have been amended to refer to "an origin of the code" which is submitted to be definite. The Examiner's statement regarding the specification is not considered to be a basis for rendering the claims indefinite.

Claims 1, 3, 8-10 and 13 stand rejected under 35 U.S.C. §103 as being unpatentable over United States Patent 6,408,272 (White et al) in view of United States Patent 6,366,882 (Bijl et al). These grounds of rejection are traversed for the following reasons.

White et al discloses a system where a local device 14 performs preliminary processing using a processor with limited computing power which includes feature parameter extraction (see column 6, lines 9-24 and column 10, lines 17-35). Fig. 2 illustrates a block diagram of the local device which includes the parameter extraction component 34 which is described in column 11, lines 44-57, and in column 17, lines 37-53.

Moreover, the local device performs preliminary processing to provide appropriate feature parameters which are extracted from the speech input and passed from the local device to the remote system for interpretation. See column 2, lines 46-53. Data sent to the remote system 12 can include frequency domain parameters extracted from speech by processing component 28 as described in column 13, lines 28-30, and further, the data may be transmitted to the remote system processing therein as described in column 18, lines 7-10.

Claim 38, which corresponds to claim 1, recites a locally distributed speech recognition system for converting spoken language of a user into digitized readable text for a mobile communication device comprising a preliminary phoneme recognition component located in said mobile communication device and a phoneme

interpreting component located remote from said mobile communication device and further, a retransmission component for retransmission of the digitized readable text back to the user which is connected to the interpreting component. This subject matter has no counterpart in the combined teachings of White et al and Bijl et al.

As discussed above, White et al disclose preliminary processing performed by a local device, but the preliminary processing is restricted to frequency domain parameters extracted by the local system which has no counterpart in claim 38 which recites the combination of a preliminary phoneme recognition component and a phoneme interpreting component. The remote processing performed by White et al involving feature parameters would not be considered by a person of ordinary skill in the art to arrive at the subject matter of claim 38 which corresponds to claim 1 pertaining to the combination of a preliminary phoneme recognition component and a phoneme interpreting component.

The teachings of Bijl et al have been cited by the Examiner as suggesting a component for re-transmission of digitized text back to the user in order to enable the user to edit the converted text. However, this subject matter would not suggest the modification of White et al to arrive at the subject matter of claim 38 and further the subject matter of claims 45-47 and 50 which correspond to dependent claims 3, 8-10 and 13.

Claim 2 stands rejected under 35 U.S.C. §103 as being unpatentable over White et al in view of Bijl et al further in view of United States Patent 6,061,718 (Nelson). Claim 39, which corresponds to claim 2, is patentable for the same reasons set forth above with respect to claim 38. The citation of Nelson as disclosing readable text transmitted in a short message does not cure the

deficiencies noted above with respect to claim 38 pertaining to the combination of White et al and Bijl et al.

Claims 4-5 stand rejected under 35 U.S.C. §103 as being unpatentable over White et al in view of Bijl et al further in view of United States Patent 5,150,449 (Yoshida et al). These grounds of rejection are traversed with respect to claims 41 and 42 which correspond to claims 4 and 5. Yoshida et al have been cited as teaching a preliminary recognition component comprising a neural network and/or a time delay neuronal network. However, Yoshida et al do not cure the deficiencies noted above with respect to the combination of White et al and Bijl et al with respect to claim 38.

Claim 6 stands rejected under 35 U.S.C. §103 as being unpatentable over White et al in view of Bijl et al further in view of United States Patent 6,606,486 (Cubbage et al). These grounds of rejection are traversed with respect to claim 43 which corresponds to claim 6.

Cubbage et al have been cited as teaching an interpreting component comprising a component for converting different codes into each other. However, Cubbage et al do not cure the deficiencies noted above with respect to the combination of White et al and Bijl et al with respect to claim 38.

Claim 7 stands rejected under 35 U.S.C. §103 as being unpatentable over White et al in view of Bijl et al further in view of United States Patent 6,557,026 (Stephens, Jr.). These grounds of rejection are traversed with respect to newly submitted claim 44 which corresponds to claim 7.

Stephens, Jr. has been cited as disclosing the preliminary recognition component and the interpreting component comprises a storage component to store

coded phonemes for further processing. It is submitted that Stephens, Jr. does not cure the deficiencies noted above with respect to White et al and Bijl et al.

Moreover, there is no basis in the record why a person of ordinary skill in the art would be led to modify the teachings of White et al to utilize parameter extraction in the local devices 14 for further processing at the remote system 12 utilizing phonemes.

Claims 11 and 14 stand rejected under 35 U.S.C. §103 as being unpatentable over White et al in view of Bijl et al further in view of United States Patent 6,662,159 (Komori et al). These grounds of rejection are traversed with respect to newly submitted claims 48 and 51 which correspond to claims 11 and 14.

Komori et al has been cited as disclosing the interpreting component comprises a grammar recognition component. However, Komori et al do not cure the deficiencies noted above with respect to White et al and Bijl et al with respect to claim 38.

Claim 15 stands rejected under 35 U.S.C. §103 as being unpatentable over White et al in view of Bijl et al further in view of United States Patent 6,424,943 (Sherwood et al). This ground of rejection is traversed with respect to claim 52.

Claim 52 recites an interpreting component for use in a locally distributed speech recognition system comprising an input for receiving digitally encoded phonemes from a remote preliminary phoneme recognition component, an output for digital coded readable text and a component for reinterpreting a first draft of a digitized readable text. As discussed above with respect to claim 38, White et al do not teach a remote system 12 for processing phonemes provided from local devices 14 in view of the distributed processing in White et al being based upon feature

parameter extraction being performed to the local level which is transmitted to the remote device. Moreover, Sherwood et al do not cure the deficiencies noted above with respect to White et al teaching principal feature extraction which would not motivate a person of ordinary skill in the art to provide processing of phonemes locally which are transmitted to a remote device for further phoneme processing. A person of ordinary skill in the art would not be led to arrive at the subject matter of claim 52 involving the combination of White et al and Bijl et al for the reasons noted above with respect to claim 38. Moreover, Sherwood et al teaching receiving digitally coded phonemes would not motivate a person of ordinary skill in the art to modify the teachings of White et al to utilize local device phoneme processing. Accordingly, it is submitted that the subject matter of claim 52 is patentable.

Claims 16, 17, 20, 21, 23, 24, 25, 27, 28, 30, 31, 33, 34, 35 and 37 stand rejected under 35 U.S.C. §103 as being unpatentable over White et al in view of Bijl et al further in view of United States Patent 6,219,638 (Padmanabhan et al). These grounds of rejection are traversed for the following reasons.

Independent claims 53, 58 and 65, which correspond to claims 16, 21 and 28, substantively recite local extraction or processing of phonemes which are transmitted to a remote interpreting component which has no counterpart in the combined teachings of White et al and Bijl et al for the reasons set forth above with respect to claim 38. Moreover, Padmanabhan et al has been cited for suggesting a component for accepting or rejecting text received from a remote interpreting component and a component for dispatching a recorded message. However, Padmanabhan et al do not cure the deficiencies noted above with respect to the combination of White et al and Bijl et al.

Moreover, dependent claims 54, 57, 60, 61, 62, 64, 67, 68, 70, 71, 72 and 74, which correspond to claims 17, 20, 23, 24, 25, 27, 30, 31, 33, 34, 35 and 37 define further aspects of the present invention which are not suggested by the proposed combination of White et al and Bijl et al in view of Padmanabhan et al.

Claims 18, 32 and 36 stand rejected under 35 U.S.C. §103 as being unpatentable over White et al in view of Bijl et al further in view of Padmanabhan et al, further in view of United States Patent 6,424,943 (Sherwood et al). These grounds of rejection are traversed with respect to newly submitted claims 55, 69 and 73 which correspond to claims 18, 32 and 36.

Sherwood et al has been cited as having a preliminary recognition component distinguish vowels, consonants, intervals and probabilities. However, this teaching does not cure the deficiencies noted above with respect to White et al and Bijl et al in the independent claims 53, 58 and 73. It is noted that the Examiner has referred to Gerson et al. It is understood that this is a typographical error since the Examiner has not discussed Gerson et al in the context of the rejection and the Examiner has not cited Gerson et al in the Notice of References.

Claims 19 and 22 stand rejected under 35 U.S.C. §103 as being unpatentable over White et al in view of Bijl et al further in view of Padmanabhan et al further in view of United States Patent 6,061,718 (Nelson). These grounds of rejection are traversed with respect to newly submitted claims 56 and 59 which correspond to claims 19 and 22.

Nelson et al's citation as having code used in a short message system does not cure the deficiencies noted above with respect to the combination of White et al and Bijl et al as discussed above with respect to claim 53. Moreover, it is noted that

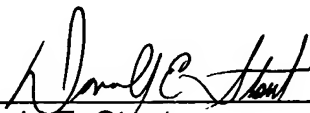
the Examiner again refers to Gerson et al which has not been identified on the record.

In view of the foregoing amendments and remarks, it is submitted that each of the claims in the application is in condition for allowance. Accordingly, early allowance thereof is respectfully requested.

To the extent necessary, Applicants petition for an extension of time under 37 C.F.R. §1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 01-2135 (1123.40972X00) and please credit any excess fees to such Deposit Account.

Respectfully submitted,

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Attachments

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